

# ABSTRACT

To measure USJ profile abruptness, a PMR-type optical metrology tool is to perform a series of two or more measurements, each with different pump/probe beam separations. Quadrature (Q) and in-phase (I) measurements are obtained for each measurement and used to derive a line in I-Q space. An abruptness measurement is derived by comparing the line slope to a similar line slope obtained for a sample having a known USJ profile. USJ profile depth is measured by obtaining quadrature (Q) values for one or more measurements. Each Q value is translated to a corresponding depth measurement using a table or similar lookup device.

10